(No Model.)

J. J. GRAVES.

STOVE GRATE.

No. 419,012. Patented Jan. 7, 1890.

Fig. 1.

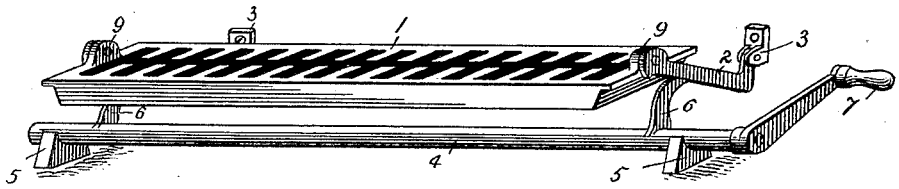
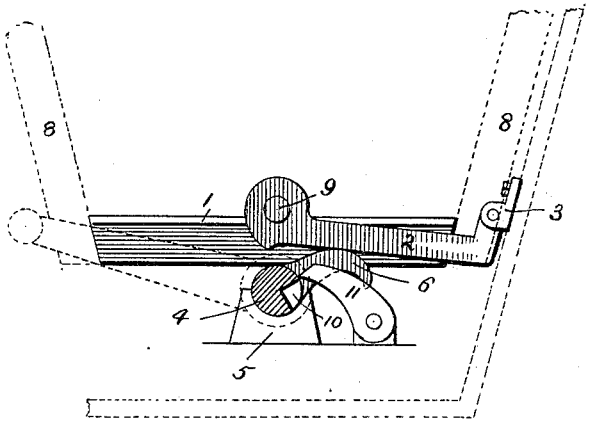


Fig. 2.



Witnesses
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By his Attorney J. S. Barker

UNITED STATES PATENT OFFICE.

JOHN J. GRAVES, OF BUFFALO, NEW YORK, ASSIGNOR TO SHERMAN S. JEWETT & CO., OF SAME PLACE.

STOVE-GRATE.

SPECIFICATION forming part of Letters Patent No. 419,012, dated January 7, 1890.

Application filed September 26, 1889. Serial No. 325,116. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. GRAVES, a citizen of the United States, residing at 470 Connecticut street, Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Stove-Grates, of which the following is a specification.

My invention has for its object to vary the size of the combustion-chamber or fire-box of a stove, so that a greater or less body of fuel shall be contained therein, in order that the intensity of the fire may be regulated, and also a needless consumption of fuel be prevented; and this object I attain by supporting the grate in the fire-box by means of an adjusting mechanism of novel construction, which I have illustrated in the drawings, wherein—

Figure 1 is a perspective view of a grate and its adjustable supporting mechanism, the grate being in its raised position. Fig. 2 is an end view thereof, the grate being lowered.

My invention is particularly adapted for use in cook-stoves, to any of the various styles of which it may be readily adapted.

In the drawings I have shown only so much of a stove as is necessary to an understanding of my present invention.

1 represents a grate, which is supported at its ends upon trunnions 9 at the ends of the arms 2 2, upon which, by preference, the grate is free to turn in order that it may be dumped. The arms 2 are pivotally secured at their rear ends to some fixed part of the stove, such as the lugs 3, formed on or secured to one of the interior dividing-plates.

4 is a rock-shaft extending across the fire-box beneath the grate, and supported so as to be rocked in the blocks 5. This shaft carries two arms or cams 6, situated, respectively, beneath the swinging arms 2 and against which they are brought to bear, their upper engaging surfaces being by preference rounded, as shown, to insure easy-sliding movements upon the arms 2.

One end of the shaft 4 extends through the outer side stove-plate, and is adapted to receive a handle 7, by which the shaft is turned.

When the shaft 4 is rocked into the position shown in Fig. 2, the arms 2 and the arms or cams 6 lie substantially horizontal, the end of the former resting upon the rock-shaft and the grate occupying its lowermost position in the bottom of the fire-box, thereby, in connection with the walls 8 of the fire-box, forming a deep fire-chamber which will contain a comparatively large mass of burning-fuel. As the shaft is turned by the handle 7 or otherwise, the arms or cams 6 engage with the swinging arms 2, and raise them and the grate 1 into the position shown in Fig. 1, in which position the parts are held by reason of the arms 2 resting upon the ends of the arms or cams 6, which stand substantially vertical, and thereby a shallow fire-chamber is maintained. The grate being pivotally supported upon the trunnions 9 is maintained in a horizontal condition, whether in its raised or lowered position, and is also free to be dumped in whichever position it may be.

It is sometimes desirable to sustain the grate at a height intermediate between the two positions just referred to, and to permit this I provide the shaft 4 with a notch or shoulder 10, with which engages a pawl 11, the relative position of the notch being such that when the grate has been raised about half-way to its highest position the pawl or dog 11 will catch therein and hold the parts. This pawl will be usually arranged upon the outside of the side stove-plate, so that it may be easily raised out of the way of the notch or shoulder when the grate is being lowered.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. The combination, with the grate and the swinging arms which support the grate at its opposite ends, of the rock-shaft provided with arms or cams adapted to bear against the said swinging arms and to raise them and the grate as the shaft is rocked, substantially as set forth.

2. The combination of the grate, the swinging arms provided at their ends with trunnions upon which the grate is mounted, and a rock-shaft provided with arms or cams for engaging with and lifting both the said swinging arms, substantially as set forth.

3. The combination of the grate, the swinging arms which support the grate, the rock-shaft mounted below the grate, and the arms

or cams 6, carried by the rock-shaft, and each arranged beneath one of the said swinging arms, substantially as set forth.

4. The combination of the grate, the swinging arms supporting the grate, the rock-shaft provided with arms or cams for lifting the said swinging arms and the grate, and having a notch or shoulder 10, and a pawl adapted to engage with the said notch or shoulder, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN J. GRAVES.

Witnesses:

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